Prediction of Organizational Behavior by Norman Frederiksen; Ollie Jensen; Albert E. Beaton; Bruce Bloxom
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seen by Donahue and Spates is a passive process wherein action is the object not the objective of research, and social change an indirect by-product.

The handbook provides a ready framework for student conducted field research; it suggests appropriate steps and provocative subjects. Teachers will find it useful in directing student projects in live social settings. The handbook does not direct the application of action research to social change. Change agents—be they teachers, students, or practitioners—will receive little guidance for their efforts here.

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Prediction of Organizational Behavior.

Norman Frederiksen, Ollie Jensen, and Albert E. Beaton, with a contribution by Bruce Bloxom. New York: Pergamon, 1972. 333 pp. No price given.

This book reports on a study to determine the effects of experimental variation in organizational climate on the correlations between predictor and performance variables. By effectively including a large number of variables in each of three categories, in a study which is both an experiment and multivariate correlational research, it breaks new ground in research on organizations and is an elegant undertaking most worthy of attention.

In the first two chapters the authors discuss the need to include situational factors in studies of the behavior of individuals in organizations, and they attribute the difficulty of doing so to lack of dependable typologies of situations and to the shortcomings of the statistical models used to examine person-situation interactions. From this analysis they derive four aspects of the study they report: a definition of situation as "a set of circumstances that is likely to influence the behavior of at least some individuals, and that is likely to recur repeatedly in essentially the same form" (p. 22); a criterion for classifying situations, namely, "their tendency to elicit similar behaviors" (p. 34); the in-basket as a means of collecting information on a large number of predictor, performance, and situational variables, and a three-mode factor analysis developed by Tucker (1964, 1965) as a procedure for making the required analysis. Their treatment of the literature regarding typologies of situations and of in-baskets as means of collecting data in the study of organizational behavior is important in itself, although the highlights of their review and the general plan of their study were presented earlier (Frederiksen, 1972).

In the study itself, an in-basket especially developed for the purpose, but built upon the extensive prior work by ETS, was used to examine the performance of 260 male executives

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from four higher echelons of the California state government. The actions taken by these executives on in-basket items during two institutes held for the purpose yielded 55 scores which were reduced by factor analysis to 10 performance or criterion factors.

Prior to attending the institutes the executives responded to questionnaires which provided predictor variables in the study: (1) a background inventory which when factor analyzed, produced seven factors; (2) tests of cognitive ability, several of which were from the *Manual for Kit of Reference Tests for Cognitive Factors* (French *et al.*, 1963) and two experimental ones which yielded nine cognitive factors; and (3) several personality scales chosen from a variety of sources which yielded four factors.

As situational variables, the researchers chose two ''climate'' dichotomies which had been used in other research, and which seemed both to meet their definition of a situation and to be feasible to represent in a simulation: innovation versus rules orientation, and global versus close supervision. Executives were randomly assigned to the four conditions formed by the matrix based on these two variables. The conditions were created for the executives by variations in the materials used in the in-baskets, such as memos from the agency head, statements of operating philosophy, underlining of key words in the materials, etc. Results confirmed that both the randomization and the development of the intended climates were achieved effectively (pp. 83-84 and 135-138).

One primary question explored was whether organizational climates have uniform effects on individuals, or whether people are influenced differently depending on their personal characteristics. As a first step in answering this, comparisons were made for each pair of contrasting climate groups of the slope of regressions in in-basket performance factor scores on measures of personal characteristics. These results were negative, a significant difference being found in only 1 of 33 instances. This finding was contrary to the researchers' intuitive judgment but was not inconsistent with what they found in their literature review. They concluded that it substantiated their view that the usual method of studying person-situation interactions was inadequate and that it justified their search for more effective ones. Next, they examined the data by the three-mode factor analysis for which they made the case earlier. This yielded two additional taxonomies: that of paper-work problems of state executives, and that of persons who differed with respect to their performance factor/item factor interrelationships. The correlations among these sets of factors for each climate were generally low, although in some cases they differed for contrasting climates. One example cited was that in a rules climate a high score on the test of inductive reasoning was associated with a tendency to score high on the program-centered manager factor while in the innovative climate a high score on this test was negatively related to the score on the program-centered manager factor. Although they did not find ways to test for statistical significance, the researchers concluded that the results seemed to demonstrate a second-order interaction ''in the sense that the nature of the interaction of items and personal characteristics in influencing behavior was in turn modified by a more general situational variable,'' the organizational climate condition.

Another purpose of the study was to determine the effects of climate variables on the interrelationships or factor structure

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of the performance variables. Comparisons were made for innovative versus rules groups, global versus detailed supervision groups, and compatible climate groups, i.e., those with innovative orientation and global supervision or with rules orientation and close supervision, versus those with incompatible climates, i.e., those with innovative orientation and close supervision or with rules orientation and global supervision. The variance-covariance matrices of performance factor scores were found to be significantly different ($p=.002$) in all three of these comparisons, indicating that the types of situations studied clearly did influence the interrelationships of the performance factor scores. In the climates which provided more freedom of thought and action—innovative orientation and global supervision—the more thoughtful executives dealt directly with their peers on problems involving peers, while in the more restrictive climates the thoughtful executives worked through their superiors on these problems. While this finding is not surprising, it is significant that the methodology developed permitted an empirical test of this complicated relationship.

A third major question concerned the effects of the climate variables on the means of the performance variables. The only performance variable found to be significantly affected was productivity, and it was influenced only by the consistency of climate; the amount of work accomplished was greater when the climate conditions were consistent than when they were inconsistent.

The authors conclude the book with a discussion of the compatibility of their findings with other research and by considering implications for personnel practice, for a model of human behavior, and for the methodology of social psychological research.

As implied throughout this review, I think the major contribution of the study is that it demonstrates one promising way to give meaning to the frequently expressed view that organizations are systems of interdependent variables and that efforts to understand them need to cope with this complexity. Further use of the combination of simulation as a means of approaching the complexity of organizational behavior in an experiment, and the use of Tucker's three-mode factor analysis as a means of analysing the data, appear to me to be justified by the results of this study.

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